#9

PCT09

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/857,636

DATE: 02/25/2002
TIME: 10:54:19

Input Set : A:\00537-186001.TXT
Output Set: N:\CRF3\02252002\I857636.raw

PS

ENTERED

```
 4 <110> APPLICANT: Dong, Zheng Xin
 7 <120> TITLE OF INVENTION: Analogues of GLP-1
10 <130> FILE REFERENCE: 00537-186002
12 <140> CURRENT APPLICATION NUMBER: 09/857,636
13 <141> CURRENT FILING DATE: 2001-06-07
15 <150> PRIOR APPLICATION NUMBER: PCT/EP99/09660
16 <151> PRIOR FILING DATE: 1999-12-07
18 <150> PRIOR APPLICATION NUMBER: 60/111,255
19 <151> PRIOR FILING DATE: 1998-12-07
21 <150> PRIOR APPLICATION NUMBER: 09/206,601
22 <151> PRIOR FILING DATE: 1998-12-07
24 <160> NUMBER OF SEQ ID NOS: 411
26 <170> SOFTWARE: FastSEQ for Windows Version 4.0
28 <210> SEQ ID NO: 1
29 <211> LENGTH: 30
30 <212> TYPE: PRT
31 <213> ORGANISM: Homo sapiens
33 <400> SEQUENCE: 1
34 His Ala Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
35  1               5                  10                  15
36 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Gly Arg
37             20                  25                  30
39 <210> SEQ ID NO: 2
40 <211> LENGTH: 30
41 <212> TYPE: PRT
42 <213> ORGANISM: Artificial Sequence
44 <220> FEATURE:
45 <223> OTHER INFORMATION: Mutagen
47 <221> NAME/KEY: VARIANT
48 <222> LOCATION: 2, 29
49 <223> OTHER INFORMATION: Xaa = Aib (alpha-aminoisobutyric acid)
51 <221> NAME/KEY: VARIANT
52 <222> LOCATION:
53 <223> OTHER INFORMATION: this sequence has an amidated c-terminus
55 <400> SEQUENCE: 2
W--> 56 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
57  1               5                  10                  15
W--> 58 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
59             20                  25                  30
61 <210> SEQ ID NO: 3
62 <211> LENGTH: 30
63 <212> TYPE: PRT
64 <213> ORGANISM: Artificial Sequence
```

RAW SEQUENCE LISTING DATE: 02/25/2002
PATENT APPLICATION: US/09/857,636 TIME: 10:54:19

Input Set : A:\00537-186001.TXT
Output Set: N:\CRF3\02252002\I857636.raw

```
66 <220> FEATURE:
67 <223> OTHER INFORMATION: Mutagen
69 <221> NAME/KEY: VARIANT
70 <222> LOCATION: 1
71 <223> OTHER INFORMATION: Xaa = Na-HEPES-His
72       (N-alpha-(4-(2-hydroxyethyl)-1-piperazine-ethanesu
73       lfonic acid)-histidine
75 <221> NAME/KEY: VARIANT
76 <222> LOCATION: 2, 29
77 <223> OTHER INFORMATION: Xaa = Aib (alpha-aminoisobutyric acid)
79 <221> NAME/KEY: VARIANT
80 <222> LOCATION:
81 <223> OTHER INFORMATION: this sequence has an amidated c-terminus
83 <400> SEQUENCE: 3
W-> 84 Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
   85  1               5                  10                  15
W-> 86 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
   87              20                  25                  30
89 <210> SEQ ID NO: 4
90 <211> LENGTH: 30
91 <212> TYPE: PRT
92 <213> ORGANISM: Artificial Sequence
94 <220> FEATURE:
95 <223> OTHER INFORMATION: Mutagen
97 <221> NAME/KEY: VARIANT
98 <222> LOCATION: 1
99 <223> OTHER INFORMATION: Xaa = Na-HEPA-His
100       (N-alpha-(4-(2-hydroxyethyl)-1-piperazineacetyl)-
101       histidine
104 <221> NAME/KEY: VARIANT
105 <222> LOCATION: 2, 29
106 <223> OTHER INFORMATION: Xaa = Aib (alpha-aminoisobutyric acid)
108 <221> NAME/KEY: VARIANT
109 <222> LOCATION:
110 <223> OTHER INFORMATION: this sequence has an amidated c-terminus
112 <400> SEQUENCE: 4
W-> 113 Xaa Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
   114  1               5                  10                  15
W-> 115 Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg
   116              20                  25                  30
118 <210> SEQ ID NO: 5
119 <211> LENGTH: 30
120 <212> TYPE: PRT
121 <213> ORGANISM: Artificial Sequence
123 <220> FEATURE:
124 <223> OTHER INFORMATION: Mutagen
126 <221> NAME/KEY: VARIANT
127 <222> LOCATION: 2
128 <223> OTHER INFORMATION: Xaa = Aib (alpha-aminoisobutyric acid0
```

RAW SEQUENCE LISTING DATE: 02/25/2002
PATENT APPLICATION: US/09/857,636 TIME: 10:54:19

Input Set : A:\00537-186001.TXT
Output Set: N:\CRF3\02252002\I857636.raw

130 <221> NAME/KEY: VARIANT
131 <222> LOCATION: 29
132 <223> OTHER INFORMATION: Xaa = beta-Ala (beta-alanine)
134 <221> NAME/KEY: VARIANT
135 <222> LOCATION:
136 <223> OTHER INFORMATION: this sequence has an amidated c-terminus
138 <400> SEQUENCE: 5
W--> 139 **His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly**
140 1 5 10 15
W--> 141 **Gln Ala Ala Lys Glu Phe Ile Ala Trp Leu Val Lys Xaa Arg**
142 20 25 30
144 <210> SEQ ID NO: 6
145 <211> LENGTH: 30
146 <212> TYPE: PRT
147 <213> ORGANISM: Artificial Sequence
149 <220> FEATURE:
150 <223> OTHER INFORMATION: Mutagen
152 <221> NAME/KEY: VARIANT
153 <222> LOCATION: 2, 29
154 <223> OTHER INFORMATION: Xaa = Aib (alpha-aminoisobutyric acid)
156 <221> NAME/KEY: VARIANT
157 <222> LOCATION: 30
158 <223> OTHER INFORMATION: Xaa = N-epsilon-tetradecanoyl-lysine
160 <221> NAME/KEY: VARIANT
161 <222> LOCATION:
162 <223> OTHER INFORMATION: this sequence has an amidated c-terminus
164 <400> SEQUENCE: 6
W--> 165 **His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly**
166 1 5 10 15
W--> 167 **Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa**
168 20 25 30
170 <210> SEQ ID NO: 7
171 <211> LENGTH: 30
172 <212> TYPE: PRT
173 <213> ORGANISM: Artificial Sequence
175 <220> FEATURE:
176 <223> OTHER INFORMATION: Mutagen
178 <221> NAME/KEY: VARIANT
179 <222> LOCATION: 2, 29
180 <223> OTHER INFORMATION: Xaa = Aib (alpha-aminoisobutyric acid0
182 <221> NAME/KEY: VARIANT
183 <222> LOCATION: 28
184 <223> OTHER INFORMATION: Xaa = N-epsilon-tetradecanoyl-lysine
186 <221> NAME/KEY: VARIANT
187 <222> LOCATION:
188 <223> OTHER INFORMATION: this sequence has an amidated c-terminus
190 <400> SEQUENCE: 7
W--> 191 **His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly**
192 1 5 10 15

RAW SEQUENCE LISTING DATE: 02/25/2002
PATENT APPLICATION: US/09/857,636 TIME: 10:54:19

Input Set : A:\00537-186001.TXT
Output Set: N:\CRF3\02252002\I857636.raw

W--> 193 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Xaa Xaa Arg
194 20 25 30
196 <210> SEQ ID NO: 8
197 <211> LENGTH: 32
198 <212> TYPE: PRT
199 <213> ORGANISM: Artificial Sequence
201 <220> FEATURE:
202 <223> OTHER INFORMATION: Mutagen
204 <221> NAME/KEY: VARIANT
205 <222> LOCATION: 2, 29, 31
206 <223> OTHER INFORMATION: Xaa = Aib (alpha-aminoisobutyric acid)
208 <221> NAME/KEY: VARIANT
209 <222> LOCATION: 32
210 <223> OTHER INFORMATION: Xaa = N-epsilon-tetradecanoyl-lysine
212 <221> NAME/KEY: VARIANT
213 <222> LOCATION:
214 <223> OTHER INFORMATION: this sequence has an amidated c-terminus
216 <400> SEQUENCE: 8
W--> 217 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
218 1 5 10 15
W--> 219 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Arg Xaa Xaa
220 20 25 30
222 <210> SEQ ID NO: 9
223 <211> LENGTH: 30
224 <212> TYPE: PRT
225 <213> ORGANISM: Artificial Sequence
227 <220> FEATURE:
228 <223> OTHER INFORMATION: Mutagen
230 <221> NAME/KEY: VARIANT
231 <222> LOCATION: 2, 29
232 <223> OTHER INFORMATION: Xaa = Aib (alpha-aminoisobutyric acid0
234 <221> NAME/KEY: VARIANT
235 <222> LOCATION: 30
236 <223> OTHER INFORMATION: Xaa = N-epsilon-decanoyl-lysine
238 <221> NAME/KEY: VARIANT
239 <222> LOCATION:
240 <223> OTHER INFORMATION: this sequence has an amidated c-terminus
242 <400> SEQUENCE: 9
W--> 243 His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly
244 1 5 10 15
W--> 245 Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa
246 20 25 30
248 <210> SEQ ID NO: 10
249 <211> LENGTH: 30
250 <212> TYPE: PRT
251 <213> ORGANISM: Artificial Sequence
253 <220> FEATURE:
254 <223> OTHER INFORMATION: Mutagen
256 <221> NAME/KEY: VARIANT

RAW SEQUENCE LISTING DATE: 02/25/2002
PATENT APPLICATION: US/09/857,636 TIME: 10:54:19

Input Set : A:\00537-186001.TXT
Output Set: N:\CRF3\02252002\I857636.raw

257 <222> LOCATION: 2, 29
258 <223> OTHER INFORMATION: Xaa = Aib (alpha-aminoisobutyric acid)
260 <221> NAME/KEY: VARIANT
261 <222> LOCATION: 30
262 <223> OTHER INFORMATION: Xaa = N-epsilon-dodecanesulfonyl-lysine
264 <221> NAME/KEY: VARIANT
265 <222> LOCATION:
266 <223> OTHER INFORMATION: this sequence has an amidated c-terminus
268 <400> SEQUENCE: 10
W--> 269 **His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly**
270 1 5 10 15
W--> 271 **Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa**
272 20 25 30
274 <210> SEQ ID NO: 11
275 <211> LENGTH: 30
276 <212> TYPE: PRT
277 <213> ORGANISM: Artificial Sequence
279 <220> FEATURE:
280 <223> OTHER INFORMATION: Mutagen
282 <221> NAME/KEY: VARIANT
283 <222> LOCATION: 2, 29
284 <223> OTHER INFORMATION: Xaa = Aib (alpha-aminoisobutyric acid)
286 <221> NAME/KEY: VARIANT
287 <222> LOCATION: 30
288 <223> OTHER INFORMATION: Xaa =
289 N-epsilon-(2-(4-tetradecyl-1-piperazine)-acetyl)lysine
291 <221> NAME/KEY: VARIANT
292 <222> LOCATION:
293 <223> OTHER INFORMATION: this sequence has an amidated c-terminus
295 <400> SEQUENCE: 11
W--> 296 **His Xaa Glu Gly Thr Phe Thr Ser Asp Val Ser Ser Tyr Leu Glu Gly**
297 1 5 10 15
W--> 298 **Gln Ala Ala Arg Glu Phe Ile Ala Trp Leu Val Arg Xaa Xaa**
299 20 25 30
301 <210> SEQ ID NO: 12
302 <211> LENGTH: 30
303 <212> TYPE: PRT
304 <213> ORGANISM: Artificial Sequence
306 <220> FEATURE:
307 <223> OTHER INFORMATION: Mutagen
309 <221> NAME/KEY: VARIANT
310 <222> LOCATION: 2, 29
311 <223> OTHER INFORMATION: Xaa = Aib (alpha-aminoisobutyric acid)
313 <221> NAME/KEY: VARIANT
314 <222> LOCATION: 30
315 <223> OTHER INFORMATION: Xaa = 1-(4-tetradecyl-piperazine)-acetyl)asparagines
317 <221> NAME/KEY: VARIANT
318 <222> LOCATION:
319 <223> OTHER INFORMATION: this sequence has an amidated c-terminus

Use of n and/or Xaa has been detected in the Sequence Listing. Review the Sequence Listing to insure a corresponding explanation is presented in the <220> to <223> fields of each sequence using n or Xaa.

VERIFICATION SUMMARY DATE: 02/25/2002
PATENT APPLICATION: US/09/857,636 TIME: 10:54:20

Input Set : A:\00537-186001.TXT
Output Set: N:\CRF3\02252002\I857636.raw

L:56 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:58 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
L:84 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:86 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:3
L:113 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:115 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:4
L:139 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:141 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
L:165 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:167 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:6
L:191 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:193 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:7
L:217 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:219 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:243 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:245 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9
L:269 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10
L:271 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10
L:296 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:298 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
L:322 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:324 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
L:348 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:350 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13
L:379 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:381 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14
L:405 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:407 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:15
L:431 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:433 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
L:453 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:455 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:17
L:475 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:477 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:18
L:501 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
L:503 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
L:527 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:529 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20
L:549 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
L:551 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:21
L:575 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22
L:577 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:22
L:601 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
L:603 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
L:627 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24
L:629 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24
L:659 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25
L:661 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25

VERIFICATION SUMMARY DATE: 02/25/2002
PATENT APPLICATION: US/09/857,636 TIME: 10:54:20

Input Set : A:\00537-186001.TXT
Output Set: N:\CRF3\02252002\I857636.raw

L:689 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
L:691 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26